

HAWAII ADMINISTRATIVE RULES

TITLE 12 DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS

SUBTITLE 8

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

CHAPTER 250

AMUSEMENT RIDES

§12-250-1	Application
§12-250-2	Definitions
§12-250-3	Design and construction requirements
§12-250-4	Access to and egress from amusement rides
§12-250-5	Load test
§12-250-6	Identification and rating plates
§12-250-7	Rebuilt and modified rides
§12-250-8	Assembly and disassembly
§12-250-9	Location notice
§12-250-10	Electrical safety requirements
§12-250-11	Air compressors and equipment
§12-250-12	Fire prevention and protection
§12-250-13	Operation of amusement rides
§12-250-14	Availability of standards

Historical Note: Chapter 250 of title 12 is based upon chapter 372 of the Hawaii Occupational Safety and Health Standards, Rules and Regulations. [Eff. 7/11/74; am 8/22/77; R 12/6/82]

§12-250-1 Application. This chapter shall apply to amusement rides installed on a temporary or permanent basis at carnivals, circuses, fairs, amusement parks, or other locations available to the public. It shall not apply to small rides such as a single animal figure or three-car carousel, usually coin operated, which are designed for use by small children. [Eff. 12/6/82; am and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-2 Definitions. As used in this chapter:
"Accident" means an unexpected happening causing loss or injury which is not due to any fault or misconduct on the part of the person injured but from consequences of which the person has no control of and may be entitled to some legal relief.

"Amusement ride" means a mechanically or electrically operated device designed to carry passengers in various modes and used for entertainment and amusement.

"Manager" means a person having possession, custody, or managerial control of an amusement ride or its temporary structure at any location available to the public whether as owner, lessee, agent, or otherwise. [Eff. 12/6/82; am 12/8/86; am and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-3 Design and construction requirements. (a) All amusement rides and their structures shall be designed, constructed, and installed so as to carry safely all loads and withstand any normal stresses to which they may be subjected.

(b) All amusement rides shall be so placed or secured with blocking, cribbing, outriggers, guys, or other means as to be stable under all operating condition.

(c) The interior and exterior parts of all amusement rides with which a passenger may come in contact shall be smooth and rounded, free from sharp, rough, or splintered edges and corners with no protruding studs, bolts, screws, or other projections which might cause injury. Interior parts on or against which a person may be forcibly thrown by the action of the ride shall be adequately padded. Any ride which is self-powered and which is operated by a passenger shall have the driving mechanism guarded and locked in place to prevent the passengers from gaining access into the mechanism. Belts, bars, foot rests, and other equipment shall be provided when necessary for safe entrance, exit, and for support while the device is in operation. Equipment and fastenings shall be of sufficient strength to retain the passengers. The fastenings shall be of a type which cannot be inadvertently or accidentally released.

(d) An amusement ride shall be provided with an automatic maximum speed limiting device if capable of exceeding its maximum safe operating speed.

(e) If cars or other components of an amusement ride may collide in such a way as to cause personal injuries upon failure of normal controls, emergency brakes sufficient to prevent the collision shall be provided.

(f) On rides which make use of inclined tracks, automatic anti-rollback devices shall be installed to prevent backward movement of the passenger carrying unit in case of power loss or failure of the propelling mechanism.

(g) Machinery used in or with an amusement ride shall be enclosed, barricaded, or otherwise effectively guarded against contact. Guards removed for maintenance purposes shall be replaced before normal operation is resumed.

(h) Areas in which persons may be endangered by the movement or operation of an amusement ride shall be fenced, barricaded, or otherwise guarded against public intrusion. [Eff. 12/6/82; am 12/8/86; ren §12-250-3 and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-4 Access to and egress from amusement rides. (a) Safe and adequate means of access to and egress from amusement rides shall be provided. The means of access and egress shall have:

- (1) Protection of users from adjacent hazards or from falling by the use of rails, enclosures, barriers, or similar means;
- (2) Secure treading and supporting surface free from debris, obstruction, projection and slipping, tripping, and other hazards;
- (3) Adequate clearance;
- (4) Stairways or ramps provided when the difference between two levels exceeds 8 inches (20 cm); and
- (5) Sufficient illumination by natural or artificial means to prevent tripping or exposure to other hazards.

(b) Stairways, landings, and ramps shall be designed, constructed, and maintained so as to sustain safely a live load of at least 100 pounds (45.4 kg)

per square foot with a safety factor of 5.

(c) Stairways and ramps shall be at least 22 inches (55 cm) wide. Stair treads shall be at least 9 inches (22.5 cm) deep exclusive of nosing, and the height of the riser shall not exceed 8 inches (20 cm). Between any two levels, the treads shall be of uniform depth and the risers of uniform height. The slope of a ramp shall not exceed one in four. The open sides of stairways, ramps, and platforms shall be provided with standard guard railing except as a safe and normal access to the device may otherwise require.

(d) The requirements of ANSI/ASME A12.1 shall apply in guarding amusement rides. [Eff. 12/6/82; am 12/8/86; am and ren §12-250-4 and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-5 Load test. (a) Amusement rides having suspended passenger seats or spaces, amusement rides normally operated at speeds or with movements creating severe centrifugal force, and amusement rides so elevated that a structural failure will likely cause injury shall be required to undergo and withstand the following load test without failure in any material respect: Each passenger seat or space shall be weighted with at least 150 pounds dead weight except that in a ride intended only for small children each seat or space shall be weighted with at least 100 pounds (45.4 kg); and while so loaded, the ride shall be operated at a maximum normal speed to test the full operation of all control devices, speed limiting devices, brakes, and other equipment provided for safety.

(b) A ride is unsafe if it fails to withstand the load test. If the ride has withstood a load test without failure in any material respect, it shall be required to be so tested again only if rebuilt, modified, or if there are reasonable grounds to believe that a further test is necessary to ensure safety and the department orders such test to be made.

(c) The load test shall be made in the presence of and under the supervision of an inspector from the department. Load test results witnessed and certified by a professional engineer or by a safety specialist approved by the department may be accepted in lieu of a test witnessed by an inspected from the department. [Eff. 12/6/82; am 12/8/86; am and ren §12-250-5 and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-6 Identification and rating plates. Every amusement ride shall be identified by a trade or descriptive name and an identification number and there shall be firmly attached in a readily visible location a metal plate upon which there is legibly impressed the name and number of the ride, its model number if any, and the name and address of its manufacturer. Upon the same or another attached metal plate there shall be legibly impressed the maximum safe number of passengers and the maximum safe speed. [Eff. 12/6/82; ren §12-250-6 and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-7 Rebuilt and modified rides. If an amusement ride has undergone and passed the required load test and is rebuilt or modified changing its original action, the ride shall be:

- (1) Re-identified by a different name, identification number, or both; and
 - (2) Subjected to all other provisions of this chapter as if it were a new ride not previously used, including a load test.
- [Eff. 12/6/82; am 12/8/86; ren §12-250-7 and comp 12/6/90] (Auth:

§12-250-8 Assembly and disassembly. (a) Parts of amusement rides and their structures shall be properly aligned and shall not be bent, distorted, cut, or otherwise injured to force a fit.

(b) Parts which are excessively worn or which have been materially damaged shall not be used.

(c) An inspection of all fastening and locking devices shall be made after assembly to ensure that they have been properly installed.

(d) Broken, damaged, and unsuitable tools and equipment shall not be used. Electrically operated tools shall be grounded during use unless their construction is such that special grounding is not required for safety.

(e) Assembly and disassembly of amusement rides and temporary structures shall be carried on under illumination sufficient to permit the work to be safely performed and inspected. [Eff. 12/6/82; am and ren §12-250-8 and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-9 Location notice. If any person intends to use or operate an amusement ride at any location available to the public, the department shall be notified in writing at least 5 days prior to the use or operation of the ride. The written notification shall state, at a minimum, the following:

- (1) The specific dates when the ride is to be used or operated;
- (2) The location where the ride is to be used or operated; and
- (3) The identification type and number of the ride.

If an unscheduled or emergency use or operation of a ride makes it not possible to give a 5-day notice, the notice shall be given to the department immediately by telephone. [Eff. 12/6/82; am 12/8/86; ren §12-250-9 and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-10 Electrical safety requirements. (a) All electrical wiring, equipment, and apparatus used for amusement rides or for lighting shall be properly and legally installed, operated, and maintained, as required by NFPA 70 and local ordinances.

(b) No employee shall be suffered or permitted to work in such proximity to any part of electrical power circuits that the employee may contact the same in the course of the work unless protected against shock by de-energizing the circuit, grounding it, or guarding it by effective insulation. If protection is supplied by de-energizing the circuit, the switch controlling the circuit shall be locked out to prevent inadvertent closing.

(c) The outlets of electric power lines carrying more than 120 volts shall be clearly marked to show their voltage.

(d) All electric transformer sub-stations shall be properly enclosed and proper warning signs shall be posted.

(e) Electrical apparatus and wiring located outdoors shall be of such quality and so constructed or protected that exposure to weather will not interfere with its normal operation or endanger life or property.

(f) Elevated power lines crossing access or other roads within the grounds of the carnival, circus, fair, amusement parks, or other areas where the amusement rides are located shall be so suspended as to provide minimum vertical clearance of 12 feet (3.6 m) from the road surface and minimum horizontal clearance of 3 feet (90 cm) from each side of the normal passage

space of vehicles.

(g) Wiring laid on or under surfaces traversed by vehicular or pedestrian traffic shall be adequately protected against wear and abrasion. Buried cables shall be Type UF as required by Article 339 of NFPA 70.

(h) Temporary electric wiring if suspended shall be so supported that its protective insulation will not be damaged.

(i) All electrical installations shall be properly grounded. All electrical cords shall be of the heavy duty type and shall contain an identifying grounding conductor in addition to the current-carrying conductors. The size of grounding conductor shall comply with Table 250-94 of NFPA 70.

(j) Bare wires and other uninsulated current-carrying parts shall be guarded against accidental contact by means of proper location or by a fence or other barrier.

(k) Conductors shall be provided with over-current protective devices according to load and current-carrying capacity. No such device shall be installed on neutral or grounding conductors.

(l) Where electrical power is supplied for an amusement ride by a privately operated generating system, the generator and all equipment shall be properly grounded if the system incorporates a ground.

(m) All receptacles and attachment caps shall be of the grounding type.

(n) Each electrically powered amusement ride shall be effectively grounded. The grounding shall be made effective as to all non-current-carrying metal parts which may become energized and which are exposed to contact by any person.

(o) Each electrically operated amusement ride not designed to be controlled directly by the passenger shall be provided with a disconnect power switch placed within easy reach of the operator. [Eff. 12/6/82; am and ren §12-250-10 and comp 12/6/90; am 7/6/98] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-11 Air compressors and equipment. Air compressor tanks and equipment used in connection therewith shall be constructed, equipped, operated, maintained, inspected, and tested as required by part 10 of this title. [Eff. 12/6/82; am and ren §12-250-11 and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-12 Fire prevention and protection. (a) Approved fire extinguishers shall be provided when necessary to secure reasonable and adequate protection from fire hazards.

(b) Flammable waste such as oily rags and other flammable materials shall be placed in covered metal containers which shall be kept in easily accessible locations. The containers shall not be kept at or near exits or under amusement rides.

(c) Gasoline and other volatile liquids and flammable gases shall be stored and handled in compliance with chapters 12-74 and 12-75. [Eff. 12/6/82; am and ren §12-250-12 and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-13 Operation of amusement rides. (a) It shall be the responsibility of the manager to ensure that the operator of each amusement ride is a responsible person at least 18 years of age who has been properly

instructed in the safe operation of the amusement ride.

(b) It shall be the responsibility of the manager to post all necessary warning and danger signs. Such signs shall be conspicuously located where they will render the most effective protection, shall be of sufficient size to be legible at a distance of not less than 6 feet (1.8 m), and shall be illuminated as required for good visibility. On those amusement rides where there is a greater than normal possibility of passengers being thrown from the ride, permanent notices shall be posted in locations visible to all passengers warning them that restraining devices are required to be tight.

(c) It shall be the responsibility of the operator to ensure that the restraining devices for all passengers have been properly fastened and adjusted prior to placing the ride in motion.

(d) The operator shall remain in the immediate vicinity of the operating controls at all times while the amusement ride is in motion. [Eff. 12/6/82; am and ren §12-250-13 and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)

§12-250-14 Availability of standards. (a) ANSI/ASME A12.1 is available from the American National Standards Institute, 1430 Broadway, New York, N.Y. 10018.

(b) ANSI/NFPA 70 is available from National Fire Protection Association, Batterymarch Park, Quincy, MA 02269. [Eff. 12/6/82; am 12/8/86; ren §12-250-14 and comp 12/6/90] (Auth: HRS §397-4) (Imp: HRS §397-4)